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**GAVIN GRIFT**

**SUNDAY 20 MAY**

**Session 1**

**Teachers as Architects of Learning:  
Effective Strategies for  
Learning-Focused Teachers**

**MELBOURNE**

# GAVIN GRIFT

With experience as a teacher, assistant principal and educational coach, Gavin Grift's passion, commitment and style have made him an in-demand presenter of keynotes, seminars and in-school support days. As a speaker, Gavin connects with national and international audiences on topics ranging from Cognitive Coaching and quality teacher practice to professional learning communities (PLCs) and learning-centred leadership.



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Hawker Brownlow Education  
P.O. Box 580, Moorabbin, Victoria 3189, Australia  
Phone: (03) 8558 2444 Fax: (03) 8558 2400  
Website: [www.hbe.com.au](http://www.hbe.com.au)  
Email: [orders@hbe.com.au](mailto:orders@hbe.com.au)

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## Connections to Learning Theory

In addition to reflecting this important research, we have identified twelve learning constructs that includes some of the key approaches and strategies from influential learning theory. Before examining the learning constructs, it is worth examining some of the learning theories that have shaped the way that we see education today. We took our responses from the action learning we conducted with teachers and correlated them with the most prominent learning theories that have shaped education over time, such as cognitive, behaviourist, objectivist, constructivist and social learning views. Table 1.1 (pp. 10–11) describes these prominent theories of learning and their subsequent implications for learning.

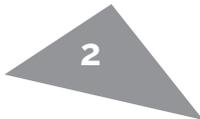
As these theories illustrate, learning isn't boxed or linear. Articulating how we learn is complex and is influenced by how we have learned, what we have read and what has worked for us. A model of instruction or a theory on learning is just that: a model or a theory. As educators, we know that learning ebbs and flows, changing depending on environmental, political, cultural and philosophical contexts. Even within the learning theories in Table 1.1, each category may have derivative theories. For example, constructivism can be broken up into social constructivism and cognitive constructivism, bringing in elements of each of those views.

As architects of learning, teachers extrapolate on some of the key concepts from learning theories and infuse them into their practice mindfully. These include:

- Open-ended questioning (cognitivist)
- Metacognition (constructivist)
- Trial and error (constructivist)
- Reinforcement (behaviourist)
- Peer teaching (social learning)
- Modelling (all learning theories)
- Summative assessment (objectivist)
- Formative assessment (constructivist)
- Self-reflection (social learning and cognitivist)
- Direct instruction (behaviourist)
- Sequencing (objectivist)
- Building simplicity to complexity (constructivist)
- Clear objectives (objectivist, behaviourist)
- Rewards (behaviourist)
- Cooperative learning (social learning and constructivist)
- Graphic organisers (constructivist)
- Gradual release of responsibility (behaviourist)

TEACHERS AS ARCHITECTS OF LEARNING

	<b>Cognitivist</b>	<b>Behaviourist</b>	<b>Objectivist</b>	<b>Constructivist</b>	<b>Social Learning</b>
<b>View of the Learner</b>	Knowledge is developed through cognitive (thinking) processes that influence the way things are learned.	Knowledge is developed through conditioning students to behave in ways that compliment learning. The observed behaviour is the focus.	Knowledge is external and is transferred from teachers to students.	We construct our own understanding and knowledge of the world, through experiencing things and reflecting on those experiences.	Knowledge is learned through interacting and observing others. This theory has some links to observational learning.
<b>Role of Teacher and View of Classroom</b>	Students can't be forced to learn so a teacher's role is to develop environments where thinking can be supported. Students actively make sense of the world through reconciling their existing perceptions with challenging tasks. They have an intrinsic motivation to want to know, and extrinsic motivation can undermine this. Students are provided thinking tools, asked lots of open-ended questions and encouraged to learn from mistakes in order to reconceptualise their thinking.	Students learn through classical and operant conditioning. In essence they are trained through the use of strategies such as associating positive events with learning, risk taking, breaking learning into smaller steps, note similarities/ differences, reinforcement of positive effort and behaviour, explicit feedback for reinforcement, publicly recognising established behaviours, using cues as reminders.	Students learn by what they hear and through reading key material. A teacher assists by explaining key concepts clearly until the student understands it.	Learners construct their own knowledge by searching for meaning, interpreting what they hear, read and see based on their previous knowledge and learning habits. Learners ask questions, explore and assess what they know. A constructivist view to learning is supportive of David A. Kolb's (1984) Model of Experiential Learning and Jerome Bruner's work around Discovery Learning.	Learners construct their own knowledge from paying attention to others and noticing what they do, retaining those behaviours through practice, feedback coaching and reinforcement. Learners can make decisions based on reward or punishments associated with particular behaviours. Human identity is central to learning in this way as we develop our sense of self identity and group identity through the way in which we interact with one another.



## CHAPTER 1: INTRODUCTION

	<b>Cognitivist</b>	<b>Behaviourist</b>	<b>Objectivist</b>	<b>Constructivist</b>	<b>Social Learning</b>
<b>Success Indicators</b>	Learning is deemed successful when students are able to hypothesise, transfer knowledge into other areas and articulate meaning to support memorisation.	Learning is deemed successful when students can acquire knowledge and behave in ways that show a relationship with learning objectives explicitly made clear from the outset.	Learning is deemed successful when students can reiterate what has been taught. They are able to regurgitate the key pieces of knowledge in ways that make sense to the teacher.	Learning is successful when students can demonstrate and articulate conceptual understanding. They can reflect on what they have learned and identify where they need to take their learning now.	Learning is successful when students reproduce the initial behaviour. They are able to make decisions about their learning based on what they have seen from others. They form their learning identity through taking cues from others and learning about themselves through their interactions.
<b>Leading Theorists and Researchers</b>	Piaget, Perkins, Gestalt, de Bono, Bloom, Glasser, Gagne	Skinner, Pavlov, Hunter, Popham, Ferster	Dick, Carey, Briggs, Wagner, Gagne	Bruner, Ausubel, Vygotsky, Ernest, Dewey, Piaget, Varela, von Glasersfeld	Ormrod, Bandura, Mayer, Sulzer-Azaroff, Rotter, Miller, Dollard, Rogers

**Table 1.1:** Prominent Learning Theories Explained.

## TEACHERS AS ARCHITECTS OF LEARNING

- Student negotiation (social learning and cognitivist)
- Clear instructions (objectivist)
- Duplication and replication (behaviourist)
- Exemplars (social learning and cognitivist)
- Practice and review (objectivist)
- Memorising (behaviourist)
- Making meaning (constructivist)
- Higher-order thinking (cognitivist)
- Concept-based learning (cognitivist)
- Real-life application (constructivist)
- Generating attention and interest (behaviourist)
- Goal setting (constructivist)
- Prior knowledge (behaviourist and constructivist)
- Competency levels (objectivist)
- Demonstrating collaboration (social learning)
- Exploration (cognitivist and constructivist)
- Deeper thinking (cognitivist)

When we list key approaches and strategies, in order to better make sense of them, there may be a danger that we see them as disconnected from one another. However, when summarising some of the key approaches and strategies that represent each theory on learning, it is important to note that they are interconnected. The purpose of sharing these approaches and strategies is to support their synthesis into constructs for learning that teachers can use to make more informed decisions in relation to their practice. This forms the basis of our ideas in this book.

We propose that the important work to be done in education is this: to reconcile what we understand about learning from being a learner with what we can learn about learning from key research, then challenge ourselves to ensure that our approaches successfully work for our students through the ongoing and mindful refinement of our teaching practice.

## The Building of Teaching Wisdom

This book is intended to assist teachers or anyone in the position of leading learning to build their wisdom around the art of teaching in order for deeper learning to prevail. It aims to support teachers to deconstruct their mental models in order to then construct new learning about their practice. These insights assist them in identifying beliefs that impact their behaviours as their teaching architecture evolves. The premise that beliefs influence behaviours is at the heart of *Teacher as Architects of Learning*.

## CHAPTER 1: INTRODUCTION

As teachers develop insight into their beliefs and practice, they are developing their wisdom. We use the term *wisdom* to mean “having insight into ourselves and knowing what to do with it”. A teacher who is developing wisdom around his or her practice can act on that wisdom in ways to allow learning to prevail.

For example, teachers who consciously and deliberately develop their wisdom are more metacognitive in their approach to teaching and learning. They model their practice so that others can learn from them and observe others in action, learning from them. They are clear about their beliefs and principles and can articulate both what they do and why they do it.

Teachers who are developing their wisdom make sound judgements in relation to planning, teaching and learning from experience and knowledge. They are sagacious in that they can utilise this knowledge in a practical sense to support their students’ learning. They are alert, crafty and smart in their approach to their work and avoid rashness in decision making. They apply knowledge, understanding, experience, discretion and intuitive understanding when meeting the challenges of activating learning.

This book supports teachers in the development of their wisdom. It draws from personal experiences and research, the research and ideas of others, and the reflections of teachers themselves to serve as a catalyst for thinking about their own practice in a way that lets learning lead.

This book is based on the premise that, for learning to succeed, we need to understand learning. It is designed to enable teachers to build their expertise, knowledge, skills, experiences and successes or failures, in a way that contributes to the building of their teaching wisdom and therefore the building of their professional practice.

We propose twelve constructs for learning for your consideration. They are at the core of the mission for teachers who want to become architects of learning through the process of building their teaching wisdom.

## The *Teachers as Architects of Learning* Mission

To understand the mission of this work it is important to understand the analogy of an architect. The role of an architect is often described as someone who designs and configures buildings. To design is to make decisions about how elements look and to configure is to arrange those elements in a particular way. The role of a teacher as an architect of learning is to design and configure learning experiences. To design is to make decisions about how the learning experience will look. To configure is to arrange the learning experience in a particular way. These instructional decisions are the catalyst to successful learning and by extension the effectiveness of the teacher.

## TEACHERS AS ARCHITECTS OF LEARNING

The development of a teacher's architecture therefore will involve ongoing processes of inquiry and discovery as they find out what works best for them and the learners they serve. They develop a personal architectural blueprint for teaching that has them consider the very strategies, techniques and approaches required to successfully impact the learner. This architecture shifts and changes over time but is always based on the difference their approach to teaching makes.

*Teachers as Architects of Learning* supports teachers in achieving three fundamental goals:

1. To activate successful student learning
2. To grow in consciousness about how intentional teaching practices impact successful learning
3. To learn through reflection both on and in action (*Schön, 1983.*)

## To Activate Successful Student Learning

We achieve this goal through increasing the likelihood of meeting the needs of learners by closing the gap between

- what is planned
- how it's taught
- what students actually learn as a result of the learning experience.

The *learning experience* is what learners actually experience as they are supported in their learning—the total sum of what they have done to come to learn something.

In order for a learning experience to be successful, it must result in the acquisition of *generative knowledge* as opposed to *fragile knowledge*. It is generative knowledge that we seek in the learner (Perkins, 1994). Figure 1 contrasts generative and fragile knowledge as explained by Grift and Satchwell (2007) and based on the work of David Perkins (1994).

## Questioning Strategies to Consider

In practice, asking questions that aid the learner can be complex work. The following three questioning strategies can assist you in planning and asking the right questions:

1. **Have a clear purpose**—Understand the reason you are asking the question and your intended outcome. If we aren't clear and deliberate in the questions we ask of the learner, we may be making the learning more complex and unattainable than it has to be. For example, when a teacher is wanting to find out how much a student understands about the power of marketing in persuading people, this is a good question: *When you think about elements in the advertisement that might be deliberately trying to sway you to think a certain way, what might some of those elements be?* A less effective question is: *So, what is this advertisement telling you?* The first question demonstrates the teacher knows what they are wanting the student to understand and communicates to the student what is important. The second question is too broad and for this context doesn't relate specifically to the outcome being sought.

## CHAPTER 2: QUESTIONING

- .....
2. **Promote a safe and supportive questioning environment**—Ensure that learners feel confident in asking and answering questions. If learners are inhibited from asking and answering questions that connect to what they may be processing, reconciling or reflecting on, they lose a tremendous opportunity to be successful in their learning. Questions play a critical role in the development of relationships with learners. It is one of the most powerful tools teachers have to find out about the world of the student he or she is teaching. One way of building respectful relationships is to question students on their attitudes, beliefs, experiences and thoughts in a manner that enables you to get to know them personally.
  3. **Develop productive questioning practice**—Be mindful about how you are going to ask questions—not only what you ask, but how you ask it. This will impact greatly on the individual learning experience. Focusing on both the content and the delivery of questions may bring us closer to bridging the gap between successful teaching and learning. The way you ask questions can go a long way to building trust between teacher and learner. For example, think about your tone and intonation as you ask questions:
    - » Are you approachable or interrogational?
    - » Are you interested or dismissive?
    - » Are you unpretentious or patronising?
    - » Are you down-to-earth or aloof?
    - » Are you positive or negative?
    - » Are you affectionate or detached?
    - » Are you calm or ruffled?
    - » Are you empathetic or insensitive?

Putting this into the classroom context, consider a teacher who asks a student the question: *Why did you decide to put the comma there?* Depending on the tone and intonation used by the teacher, the student could perceive that either they have done the wrong thing or the teacher genuinely is interested in their thought process. Or another question to consider: *What on Earth were you thinking?* Depending on the tone and intonation again, this could be construed as either very patronising (therefore insensitive) or caring (therefore empathetic).

Table 2.1 on the next page lists additional questioning dos and don'ts from the research of Paul Black and Dylan William (2004) on the impact of formative assessment on student learning. We have linked these to our three key strategies by indicating in parentheses which strategy the dos most closely correlate with (purpose, practice or environment).

## TEACHERS AS ARCHITECTS OF LEARNING

Questioning Dos	Questioning Don'ts
Do plan carefully crafted questions that support your intention (purpose).	Don't be unclear about why you are asking the questions.
Do just tell students (not question) when you want them to know something (practice).	Don't use too many closed questions that could simply be stated as instructions.
Do partner students to process higher cognitive questions together (environment).	Don't jump too quickly into higher cognitive questions.
Do plan your questions (purpose and practice).	Don't ask questions that are superficial or too many that lead to confusion.
Do give students at least three seconds waiting time; we all need processing time when we have been given a question (practice).	Don't answer the questions that you have posed yourself.
Do acknowledge all answers respectfully. If you want a particular answer, consider just telling your students (environment).	Don't ask open-ended questions when you have the actual answer in mind; don't play the "guess what's in my head" game.
Do include "no hands up" sessions where students respond to questions from the teacher by being asked directly rather than by putting their hand up to enable students to be more accountable. Have students record or talk to each other about the question before reporting back (environment).	Don't ask the same few students the majority of your questions.
Do encourage students to respond to one another's answers respectfully. Show empathy in your responses to students: "I understand why you would think that ..." (environment and practice).	Don't address misconceptions or mistakes ineffectively, such as "No, you are way off beam with that response" or "No, that's wrong." It's not that it's "bad" practice to identify something as wrong, it's just more effective when you outline reasons why and recognise their thinking.
Do ask students to explain more about their thinking, and recognise when students are thinking—even when they are wrong (purpose, practice and environment).	Don't treat student responses inequitably and inappropriately such as, "Yes okay, but I like Peter's response better" or "You are not thinking straight."

**Table 2.1:** Questioning Dos and Don'ts*Source: Adapted from Black & William (2004).*

## Self-Assessment Strategies to Consider

Providing students with opportunities to self-assess and give feedback to the teacher builds a collaborative learning culture within the classroom. The following strategies can support this collaborative process:

- **Planning time for students to**
  - » learn self-assessment skills, such as setting goals, reflecting, identifying and measuring success and effort, discussing learning with the teacher (feedback), and making active and aware decisions about learning
  - » identify the learning goals before the learning session begins
  - » reflect during and at the end of the learning experience on how they think they are going in terms of effort and achievement. For example, questions such as: How did I do? What might I need to focus on next? What support might I need? How might I go about this?
  - » have collaborative discussions with the teacher that focus on the learning.
- **Providing students with opportunities to give feedback to the teacher about their learning achievements and needs through**
  - » planned and informal one-to-one discussions
  - » indirect feedback with reflection templates, rubrics, learning maps and learning continuums.
- **Scaffolding student development of self-assessment skills through**
  - » learning continuums, learning maps and reflections (described in detail in the following sections)
- While self-assessment seems to be an innate human process driven by a survival need, many students and particularly those at risk will need support initially in assessing their own learning and feeding back to the teacher. Like any behaviour, the more it is practised, the more automated it becomes. The important thing is to continually practise even if the information students initially come up with in their feedback is minimal.

## CHAPTER 3: SELF-ASSESSMENT

## Learning Continuums

Learning continuums allow students to identify their current skill level and provides them with a guide of the skills that they need to learn to move up to the next level on the continuum. Students find continuums highly engaging as they can see and monitor their development. Continuums provide them with an end goal and help them to understand why each skill is important in reaching the end goal. In addition, they provide a framework for students to give feedback to their teachers, and they support collaborative discussions that are learning focused. Learning continuums can also be linked to benchmarked outcomes to support teachers with assessment and reporting requirements. Figure 3.2 provides an example of the first two levels of a five-level numeracy learning continuum used at Oakwood School in Victoria, Australia. In this example, students and teachers collaboratively identify the current skill level and then the student chooses the skills he or she would like to achieve. Once achieved, the student highlights and dates the achievement and then resets his or her goals around the next learning.

<b>Level 2</b>	Use thirding/fifthing-partitioning strategies
	Understand fractions ideas (equal parts, naming parts)
	Use multiplication strategies (additive, doubling)
	Rename
	Identify Cartesian product, tree diagrams
	Understand 2- to 3-digit place value
	Use arrays for basic $\times$ , $\div$
	Select and use technology to assist inquiry
	Estimate answers before calculation
	Apply number skills to real-life situations
<b>Level 1</b>	Use calculators to explore patterns
	Use similar problem strategies to find solutions
	Trust the count
	Skip count
	Use mental strategies for adding and subtracting
Make 10	
Recognise number patterns	
Double and halve	

**Figure 3.2:** Levels 1 and 2 of a numeracy learning continuum.

## Learning Maps

Learning maps provide teachers and students with a plan of how they are going to achieve the learning goals they have set. They are a collaboration between the student and the teacher based on an assessment of students' current skill. Unlike most traditional styles of curriculum planning where topics are covered for a certain amount of time regardless of whether each student has achieved the learning goal or not, the focus in the learning map is on the learning achievement, with time being the variable. Learning maps ensure that the student achieves the learning goal before moving on. They empower students to be in control of the learning and facilitate the development of self-assessment skills and collaborative learning discussion between teacher and student. There are many ways in which learning maps can be designed. Figure 3.3 shows an example of a learning map from Year 6. The italicised items are taken directly from a learning continuum.

As you can see from the example, once students achieve the learning goal, they can then date and mark it off on their learning continuum and progress to the next goal. This is a very powerful self-assessment and feedback tool that demonstrates to the student that it is effort and doing that creates learning success—not ability.

## Reflections

Another form of scaffolding self-assessment skills is the use of reflections during and after the learning experience. We have found that often students are resistant to reflecting on their learning and would rather be passive rather than active. Maybe this is as a result of their early experiences within schools where they have often felt that they have little choice in or control of the learning environment. Do not be surprised if, when you introduce reflection templates, students are unable and unwilling to effectively reflect on their learning. Once again, it is about teaching students the skills of reflecting. As discussed later in chapter 6, modelling can be a powerful way of teaching students the skills of reflection, so we recommend that you start by modelling the art of reflecting to the whole class, then move to reflecting with the students (group and individually), and finally moving on to encouraging students to independently reflect. A template can be as simple as the following:

- Something I liked about what I did today:
- Something I found interesting:
- Something I found challenging:
- Something I wondered further about:

CHAPTER 3: SELF-ASSESSMENT

My Learning Plan	
Name: Elizabeth Windsor Date: 9th March, 2013 Teacher: Clare Major	
My Learning Areas	Reflections
<b>Literacy</b> <b>Reading:</b> 1. Use strategies to figure out more complex unfamiliar words, such as reading on, sounding out and clues from illustrations. Book: <i>Diary of a Wimpy Kid</i> Read for fifteen minutes every session. Use your reading on and sounding out strategies to work out any words you're not sure about.	
<b>Literacy</b> <b>Writing:</b> 2. Develop a persuasive piece of writing Explore the persuasive writing scaffold and use it to plan out the following: "Smoking should be made illegal for people under 18 years of age." Do you agree or disagree? 3. Use punctuation and tense to match the purpose and audience Review the argument you gave above. What tense did you speak in? How did you use pauses, pitch and speed to make you point? What tense should a persuasive piece of writing be in? How might you use punctuation in your writing to make your point clearer?	
<b>Numeracy</b> <b>Numbers:</b> 4. Trust the count Use the cards to practise trusting your count 5. +/- decimal places to 0.001 Complete decimals self-assessment (number line, tense, conversion table) Check out this website to revise what we have already done: <a href="http://www.khanacademy.org/math/arithmetic/decimals">www.khanacademy.org/math/arithmetic/decimals</a>	

Figure 3.3: Sample learning map.

## TEACHERS AS ARCHITECTS OF LEARNING

- Something I achieved today:
- What I want to achieve tomorrow:
- What I want to find out:
- What learning strategy I used today:
- The highlight for me today:
- Something I learned about myself:

Start small and build students' capacity to self-assess. With relatively simple training, interventions aimed at improving self-assessment and task-selection skills can improve student learning achievement and students' ability to self-regulate. Don't be discouraged if some of your students are resistant and produce reflections such as, "I dunno." Keep going; explicitly teach self-assessment tools, and model, model, model!

## Support and Safety Strategies to Consider

Some of the ways we might support learners and create safety through the learning experience fall into three categories: cognitive learning support, behavioural learning support and structural support.

### Cognitive Learning Support

Cognitive learning support relates to what the teacher does to ensure their students learn both the “what” and the “how” of a subject or discipline area. Cognitive learning support includes the following.

- **Time for reflection and learning consolidation within the lesson or unit structure**—Learning consolidation refers to the times a teacher uses to reinforce the key understandings of a learning experience with and for students. It is the opportunity teachers take to ensure the learning is made prominent throughout the learning experience. It includes spending time talking to students about their learning and providing space for responses to questions that have arisen through the learning, as discussed in chapter 2.
- **Formally building metacognition into the learning process**—Metacognition in this construct relates to the ability of the teacher to illuminate for the learner what thinking is assisting them to learn something successfully. It enables the students to discover as much about the process of learning as they can rather than just what they are learning. For example, you might ask students to develop portfolios or different thinking structures such as Edward de Bono’s (2009) Six Thinking Hats to encourage learners to consider what thinking is assisting them and what thinking might be getting in the way. To highlight this strategy, consider the teacher who at the conclusion of a lesson asks his students to reflect on the learning through the Green Hat (focuses on creativity; the possibilities, alternatives and new ideas. It’s an opportunity to express new concepts and new perceptions). Students offer suggestions on how they might apply their learning to other contexts or future work through the targeted and open-ended questions of the teacher.
- **Graphic organisers**—These tools are effective for supporting thinking in the classroom, provided they have been intentionally matched to the purpose of the learning, and that the tool guides students to the correct thinking or results. For example, students can use a Venn diagram to find similarities and differences between two characters in a fictional book, or use a Placemat. This is where students individually and silently add their thoughts to a task or topic on a shared piece of paper and then share and elaborate on their ideas in a small group context.

## Behavioural Learning Support

Behavioural learning support relates to what the teacher does to ensure their students learn acceptable and productive behaviours that support learning and that keep learning as the focus. Behavioural learning support includes the following.

- **Using reinforcement**—For example, articulating what is working and not working, recognising misconceptions and challenging them, and publicly articulating key thinking that is supporting the meeting of learning objectives.
- **Shaping learning behaviour**—This is done by rewarding either extrinsically (stickers, charts, stars, ticks, grades and so on) or intrinsically (with specific praise, observations and self-assessment) the success of learners as they evolve through the learning journey.
- **Collaboratively developing student-directed learning goals**—After developing the goals, students have the opportunity to self-assess and measure their own learning as means of intrinsic motivation and ownership of their learning journey.

## Structural Support

Structural support relates to the operational elements the teacher focuses on in their support of student learning. They are key ingredients to providing a safe place to learn. Structural support strategies to increase levels of learning may include

- providing examples of how the learning might look (modelling and exemplars)
- asking students who are succeeding to share their thinking with others
- providing examples of process, product or content
- providing alternative ways of thinking or approaching a task for students who are experiencing difficulty
- using meditative questions such as “When you think about what is difficult, which aspects of the task seem to be stopping you?”
- providing clear instructional modelling. For example, “This is how you do it. This is what you need to think about as you do it. This is how John tackled it.” And so on.
- providing an easier or more difficult task to scaffold the learning to individual learners
- giving feedback to learners through one-to-one conferencing either informally or formally that centres on the work and recognises
  - » areas for celebration
  - » areas for strengthening
  - » areas of interest
  - » areas for further investigation.

## CHAPTER 7: SUPPORT AND SAFETY

- exploring how the teacher might continue to support the learner
- explicitly linking the work to the learning objectives
- expressing positive expectations in language that is rich in presuppositions such as, “I know you can ...”, “When you’ve been successful before ...” and “You know how you did this part correctly ... ”
- using social learning support, such as
  - » peer teaching, which can be used in smaller groups to enable learners to hear thinking from different perspectives
  - » classroom experts or consultants who can assist in areas where they have a deeper level of knowledge, skill and application
  - » cooperative learning strategies, where each member of a group is given an explicit role to support the process of collaborative learning; for example, each member of a group is assigned a different role such as summariser, speaker, recorder and questioner and is actively involved in and supports the group.
- developing a class learning plan that clearly articulates expectations for learning and behaviour, co-constructed by the teacher and students. Co-creation of such structures provides security and sets up a positive learning culture where students can feel safe to explore, create and innovate. (*See the appendix for school-based examples of learning plans from a Year 2 and Year 7 class, p. 123*)
- developing relationships through being intentional in getting to know a student’s interests, background coupled with a curiosity on what is going on in their lifeworld
- having fun by promoting times for social conversation, fun and frivolity to build relationships and personal understandings
- being aware by “measuring the temperature” of your students—observing when things are not quite right and respectfully acknowledging those observations to the student in a private and confidential manner. For example, “Alice, I have noticed that you are finding it hard to concentrate at the moment. Is there any way I can support you more? Is there anything you would like to chat about?”
- celebrating progress through effective feedback, not only about academic progress, but also for effort, persistence, getting along with others, managing conflict or taking on difficult challenges
- creating an inviting, ordered physical environment by making your classroom a place that screams out, “Kids learn and laugh within these walls!” For example, post student work on the walls—both drafts and final products. Create spaces where students can be part of the physical running of the class and where they feel part of the reason why the class operates effectively.
- providing forums for problem-solving such as regular class meetings, student-led conferences, individual meetings and restorative processes where student capacity is built to resolve conflict

## TEACHERS AS ARCHITECTS OF LEARNING

- empowering students by encouraging them, in collaboration with their teacher, to set learning goals, reflect on their progress and develop strategies to support future learning
- being transparent about assessments that will measure student work so that learners feel secure about the learning expectations.

## Time Strategies to Consider

As teachers, we need to provide space in the program for learners to engage in the three Ps: practice, practice and more practice. While some students need more time to practise than others, it is imperative that we spend considerable time immersing students in key concepts so that they develop generative knowledge. This may mean that collaborative teams need to decide what the key concepts (or essential learnings) are or, as Larry Ainsworth (2003) describes them, “power standards”.

If we don't reprioritise and reorganise our time in lessons to provide the most time for learning key concepts, using assessments in formative ways can become extremely problematic. For example, providing feedback is important, but it's easy to forego it when we feel we have too much content to cover and not enough time to cover it. This means that, in turn, we don't give ourselves the opportunity to genuinely talk with our students about their work, listen to students talk about their learning or even spend the time processing what the work has taught us. Self- and peer-assessment is often shuffled to the end of a unit or lesson, due to lack of time, rather than interwoven into the learning journey as an integral part of the process. Approaches teachers can take to use time effectively include

- prioritising high-leverage standards in areas deemed most important by the state, district, school, community or society, and delving into those deeply
- reviewing the existing timetable and eradicating any programs, events or ceremonies that do not contribute to the essential learning so students have greater chances to connect to their learning experiences
- resisting the urge to plan week-by-week with set activities, as this takes away from being able to flexibly respond within the learning experience. Instead, plan your teaching around key concepts, knowledge and skills. A series of disjointed activities without the time to learn deeply erodes the possibility for acquiring generative knowledge
- integrating key interdisciplinary learning into the timetable authentically. It is common to see primary programs with literacy blocks in the morning, maths in the middle block and integrated time in the afternoon. Instead, perhaps the whole day could be categorised as “integrated learning” if the focus changes depending on the learning intentions. For example, students may be learning how to write a procedure in a science unit on living systems. Every discipline has its own literacy. If educators can identify these literacies during the planning stage, they can integrate authentic learning opportunities
- reviewing work on an ongoing basis to check for understanding. Don't allow students to move on until you know they have mastered the learning. Time for reflection is imperative to assess where students are with their learning and to provide them with the chance to learn from one another, but it is often overlooked during the construction of a lesson. From the constructivist learning theory we know

## TEACHERS AS ARCHITECTS OF LEARNING

students learn from processing the experience they have just had so building it into the lesson is important

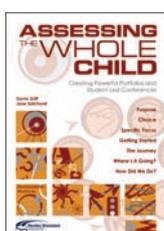
- providing students with the opportunity to duplicate and replicate. In our experience, duplication is uncommon in classrooms. Teachers fear that students will become disengaged, but engagement actually increases with success, which can increase in likelihood when teachers consolidate the learning by providing students the opportunity to apply their understanding in different ways
- encouraging memorisation of critical concepts and key knowledge can be crucial to developing deep understanding, and it requires time. Brain research indicates that spending enough time is essential to moving information from short-term to long-term memory and ultimately achieving success in learning (Sousa, 2011). The way that teams have tackled this approach is by identifying the essential learning and subsequently allocating certain times in the week to teach them since time is limited though a process of prioritisation. Many teams will also quarantine this time to ensure it is protected and free from external interruptions
- finding time for feedback. John Hattie (2009) indicates through his meta-analysis that feedback is essential to learning success and, out of all the strategies he investigated, was the most important factor in supporting learning. It is critical to use time to provide feedback for students in ways that connect prior and existing learning to future learning. It's not always that we don't have enough time, but that we need to consider how we are using our time. The following approaches make the most of feedback in limited time:
  - » Roam the room during independent practice, guided practice and cooperative group time to observe, ask questions, monitor and provide support.
  - » Give students experiencing difficulty examples of how successful work looks.
  - » Give students more than one option, asking which one they believe would be most useful to their success.
  - » Provide prompts to get students started when it becomes apparent they are having difficulty.
  - » Share other students' ideas, thoughts or work plans to support the learning of their peers.
  - » Give students wrong and right response and ask them to identify and articulate which is which, and correct any student misconceptions.
- using wait time. Providing students with time to think once the teacher has posed a question shows that we are genuinely interested in their response and honours the time it takes for the brain to process and respond. If the goal is a deeper level of thinking, then providing wait time is essential.



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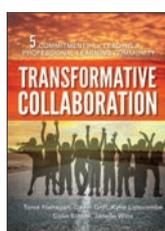
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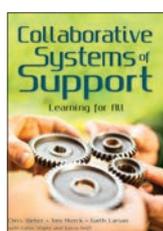
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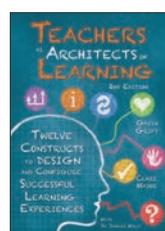
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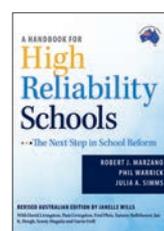
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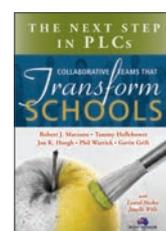
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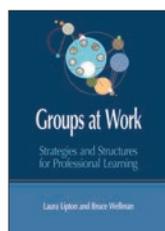
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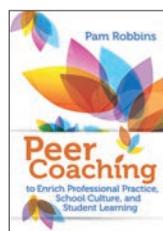
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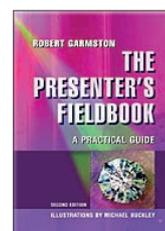
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